IN THE SPECIFICATION:

Please amend the specification as follows:

Please insert the following Summary of the Invention section after the Field of the Invention section and before the Brief Description of the Drawings section:

SUMMARY OF THE INVENTION

A method for transporting files from a cable headend is provided. In one embodiment, the method includes transforming respective filenames of the files into respective file identifiers, where each of the file identifiers comprises a packet identifier (PID) associated with a communications channel selected to transport the file, and where the file identifiers are adapted to enable receivers of the communications channels to selectively receive a file by processing the communications channel associated with the file.

A method for receiving desired packet is provided, where the desired packet is received from a server and is associated with a bit sequence. In one embodiment, the method includes calculating a data identifier from the bit sequence associated with the desired packet, and using the data identifier to receive the packet identified by the data identifier.

A method for transmitting data is provided. In one embodiment, the method includes calculating a plurality of packet identifiers based on respective bit sequences associated with respective sets of at least one packet, associating each set of at least one packet with the respective packet identifier calculated from the bit sequence for that set of at least one packet, and transmitting to a receiver associated with one of the plurality of packet identifiers a list including a respective data identifier for each set of at least one packet associated with the same packet identifier as the receiver.

A method for receiving data is provided. In one embodiment, the method includes calculating a packet identifier based on a bit sequence associated with a desired set of at least one packet, where the packet identifier is associated with a

receiver of the set of at least one packet, and receiving a list associated with the packet identifier, the list containing a plurality of data identifiers, each data identifier in the list corresponding to a respective set of at least one packet that is to be received using that packet identifier.

A system for transmitting a file from a sender to a receiver is provided. In one embodiment, the system includes a sender storage medium for storing a file having a corresponding file identifier, a converter for converting the contents of the file into a bit stream to be transmitted, and a sender transformer for providing a key based on the file identifier, where the converter incorporates the key into the bit stream for transmission to the receiver.

A system for receiving data is provided. In one embodiment, the system includes a client processor that calculates a payload identifier based on a bit sequence associated with a given set of at least one packet, where the client processor uses the payload identifier to receive the given set of at least one packet from a server.

A computer readable medium encoded with computer program code is provided. In one embodiment, when the computer program code is executed by a server processor, the server processor performs a method for transmitting a packet associated with a bit sequence, the method including calculating a data identifier based on the bit sequence, assigning the data identifier to the packet, and transmitting the packet to a receiver using the data identifier.

A method of transmitting payload data from a headend to a television converter is provided. In one embodiment, the method includes spinning a plurality of data units from the group consisting of packets and files without transmitting a directory of all of the data units being spun, and calculating information used to spin the units of data by a common calculation that is used by the television converter to receive the units of data without a directory of all of the data units being spun.

A sender is provided in a system including at least one file storage medium having at least one file to be transported from a file sender to a file receiver, where each of the at least one file to be transported has associated

therewith a corresponding file identifier. In one embodiment, the sender includes a packetizer, a transform, a multiplexer, and at least one file manager communicating with the file storage medium, the packetizer, and the transform such that the files on the file storage medium are provided to the packetizer and the corresponding filenames are provided to the transform, where the packetizer provides at least one corresponding data packet comprising the file to the multiplexer, the transform provides a packet identifier based upon the corresponding filename to the multiplexer, and, for each file to be transported, the multiplexer provides a packetized bitstream including the at least one file to be transported, where each packet of the bitstream includes the file identifier and at least a portion of the file.

A receiver is provided in a system including at least one file storage medium having at least one file to be transported from a sender to a receiver, where each of the at least one file to be transported has associated therewith a corresponding file identifier. In one embodiment, the receiver includes at least one tunable filter, a transform, and a processor programmed to utilize the at least one file to be transported, where the processor provides the filename of the at least one file to be utilized to the transform, and where the transform provides a packet identifier corresponding to the at least one filename to a tunable filter such that the tunable filter selects packets comprising the file and provides the selected packets to a packet processor and the packet processor provides the file to the processor.

Please amend the Brief Description of the Drawings section of the specification as follows:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 depicts a block diagram of an information distribution system according to an embodiment of the present invention;

FIG. 2 depicts a block diagram of a receiver suitable for use in the information distribution system of FIG. 1;

FIG. 3 depicts a block diagram of an information sending system suitable for use in the information distribution system of FIG. 1;

FIG. 4 depicts a flow diagram of a data identifier (DID) and packet identifier (PID) processing method according to an embodiment of the invention;

FIG. 5 depicts a flow diagram of a packet receiving method according to an embodiment of the invention;

FIG. 6 is a block diagram of sample data being transmitted via several PIDs; ~~and~~

FIG. 7 is a block diagram of a DC2 packet structure suitable for use with the present invention;

FIG. 8 depicts a functional block diagram of a transform according to an embodiment of the present invention; and

FIG. 9 depicts functional block diagram of a transform according to an embodiment of the present invention.

Please amend Pg. 12, Line 24 – Pg. 15, Line 4 of the specification as follows:

DETAILED DESCRIPTION OF TRANSFORM. Turning now to ~~FIG. 6,~~ FIG. 8, there is shown a functional block diagram of a transform 54 according to an embodiment of the invention. Transform 54 comprises a calculating function 300 and a PID look-up table (PLT) 305. First, the PLT 305 will be discussed.

PLT 305 is derived from the Program Specific Information (PSI) for an MPEG2 compliant system.

In order to construct the PLT of the invention, at least one range of PIDs available for transport of files is determined. In an MPEG implementation of the ~~invention~~ invention, PIDS are assigned in accordance with the requirements of the MPEG specification and the requirements of the specific system in which the invention is implemented from the Program Specific Information (PSI). PLT 305 is constructed by identifying available PIDs, listing the PIDs in a table ~~305~~ (illustratively, PLT 305), and providing an index 307 into the listing 306. PLT 305

is transported from headend to receiver on a private data stream. In accordance with MPEG convention, the PID for the private data stream used to transport PLT 305 is identified in the Program Map Table.

Calculating function 300 operates on respective filenames at its input to provide corresponding indices 307 at its output. Any calculating function having the following constraints is suitable for use in the invention. First, calculating function 300 provides a substantially unique, and repeatable index for each respective filename. Further, the indices provided by calculating function 300 have substantially a one to one correspondence to entries on ~~the PLT~~ the PLT 305.

In accordance with one embodiment of the invention, indices are calculated as follows. Respective file identifiers in the form of ASCII strings are provided to a checksum generator (CG) 320. In one embodiment of the invention, CG 320 performs a CRC on the respective ASCII strings to provide a corresponding 64 bit checksum for each ~~file~~ file. In alternative embodiments of the invention, a hash function is utilized to provide the 64 bit checksum. In other embodiments, the function is a pseudorandom number generator is utilized to provide the 64 bit checksum.

A selected 16 bit portion (designated X) of each 64 bit checksum is provided to a modulo divider 321. In one embodiment of the invention, the 16 MSBs of the 64 bit checksum comprise X. Modulo divider ~~211~~ 321 provides a PID index 301 at its output for each X at its input. The size of the PID index 301 is chosen such that all of the PID entries available for use in ~~PID map table 305~~ PLT 305 can be accessed. The number of available PID entries listed on ~~table 305~~ PLT 305 is denoted NPIDSON. In one embodiment of the invention, the PLT table 305 has 4096 entries and the index comprises 12 bits. Other embodiments of the invention have alternative sizes in accordance with the requirements of the system in which the invention is implemented. Modulo divider ~~301~~ 321 operates on X to generate PID index 301 in accordance with the relationship:

PID index = X modulo NPIDSON (1)

The PID index thus generated provides an index into the PLT 305.

As discussed above, some embodiments of the invention employ at least a second identifier, in addition to the PID, in the event that two filenames are assigned the same PID. In one embodiment of the invention, a DID and an MCI comprise the remaining 32 and 16 Least Significant Bits (LSBs) respectively of the 64 bit output of CG 320. The choice of which bits, MSBs or LSBs, are utilized is a matter of convenience and either convention is suitable for use in the invention.

One of many alternative embodiments of a calculating function for providing a PID, DID and MCI is illustrated in ~~FIG. 7~~ FIG. 9. Filename FN is provide to ~~checksum generator (CG 320)~~ CG 320. CG 320 provides a 64 bit checksum at its output. The 64 bit checksum is portioned into 4 consecutive 16 bit fields. The four 16 bit fields are provided to an XOR function 322 where they are combined in accordance with an exclusive or operation to provide a 16 bit output X to a modulo divider 321. As described above, modulo divider ~~301~~ 321 operates on X to generate PID index 301 in accordance with the relationship:

PID index = X modulo NPIDSON (1)

In similar fashion, two of the 16 bit fields are provided to a second XOR function 325. The 16 bit output of the second XOR function 325 is used as the MCI in embodiments of the invention which employ an MCI to lower the probability of collision.

In some embodiments of the invention, a DID is formed by concatenating, i.e., stringing together, two 16 bit fields of the 64 bit output of CG 320. The concatenating operation is performed by concatenator (CAT) 330. In the embodiment illustrated in ~~FIG 2~~ FIG. 9, the two least significant 16 bit fields are provided to concatenator 330. However, the choice of which two 16 bit fields are provided to concatenator 330 is not critical to the invention. Any two 16 bit fields can be utilized. However, the probability of the event that two filenames ~~being~~ are assigned the same PID is related to the degree of correlation between the PID, the MCI and the DID. The lower the correlation, the lower the probability of that event. Therefore, in embodiments of the invention wherein the lowest

correlation is desired, the two 16 bit fields chosen to form the DID are different from the two 16 bit fields chosen as a basis for the MCI.

Please amend Pg. 17, Lines 24 – 27 of the specification as follows:

where PID index is ~~the MPEG program ID~~ index associated with the PID; X is a result of performing at least one XOR operation on at least two portions of the DID (e.g., cyclic redundancy code, hash function, pseudorandom number); and NPIDSON is a number of packet processors to which payload files are being sent.